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II

**NEW MYCETOPHILIDÆ TAKEN IN CALIFORNIA
AND ALASKA**

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During the fore part of 1926 it was my privilege to study the fungus gnats in the collection of the California Academy of Sciences and to describe a few new forms from that material. I lodged most of February, March, April and part of May at Mill Valley, Marin County, California, and while there, took about 600 specimens of these little flies. Among these were 32 species which seem to be new; these are described in this paper. Most of the species before known to occur in California were also found in the material studied.

The drawings were made from dried specimens, therefore the hypopygial characters are not as exact as they would be from mounted slides, but I think it will be found that in almost, if not all, cases, where drawings were made, they are accurate enough to make the species readily recognizable and the determination certain.

It is with this hope that I offer this contribution to our knowledge of the Pacific Coast Mycetophilidæ.

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1. *Bolitophila dubiosa* Van Duzee, new species

Male: Length 4.5 mm. Head, including face, brown with gray pollen; proboscis pointed at tip, nearly as long as face; palpi and antennæ brown, scape and part of first joint of flagellum of antennæ yellow; antennæ about as long as thorax and abdomen taken together. Thorax brown, subshining, with scutellum, edges of mesonotum and humeri yellow. Abdomen brown with posterior margins of segments and the hypopygium darker brown. Coxæ yellow with yellowish hairs and bristles; femora yellowish brown, tibiæ and tarsi brown; first joint of fore tarsi about same length as their tibiæ, remaining joints of fore tarsi slightly stouter than first and, taken together, about one-third as long; halteres brown. Wings grayish with the stigma brownish; subcosta nearly straight and slightly oblique, ending in the costa just before base of radial sector; R_{2+3} ending in radius at point where radius turns to join the costa; petiole of media scarcely as long as R-M crossvein; the M-Cu crossvein at about basal third of basal cell (cell R); anterior branch of cubitus coalescing for a very short distance with the media; posterior branch curving abruptly to meet wing margin about the length of base of radial sector beyond tip of first anal vein.

Female: Antennæ a little more than half length of abdomen; pleuræ yellow; abdomen paler brown than in male; fore tibiæ and basitarsi of nearly equal length, shorter than in male; last four joints of fore tarsi compressed, widened in middle, so as to be evenly rounded below from base to tip of each joint; venation as in the male except that the petiole of the media is as long as the R-M crossvein, and the posterior branch of the cubitus ends closer to end of first anal vein, being about length of the R-M crossvein beyond anal vein.

Type: Male, No. 2476, Mus. Calif. Acad. Sci., taken by the author, March 20, 1926, at Mill Valley, Marin Co., California. *Allotype*, female, in the author's collection, taken at same time and place as type.

Bolitophila dubiosa is something like *patulosa* Garrett, but differs in having the vein R_{2+3} straight, not curved, and, as I understand it, the hypopygial appendages differ, all the appendages in this form being very short and in the type mostly concealed, the hypopygium forming a nearly round tip to the abdomen.

2. *Apemon rufa* Van Duzee, new species

Female: Length 10 mm.; of wing 8 mm. Front, upper third of face, occiput and antennæ black; first two antennal joints, and lower two-thirds of face dark reddish; palpi, thorax, abdomen, coxæ, femora, tibial

spurs and halteres yellow or reddish yellow; fore tibiæ yellowish brown, middle and hind tibiæ and all tarsi more brown; a narrow line on lateral edges of mesonotum, sutures of pleuræ, most of sternum, posterior face of metanotum, a dot at tip of each trochanter, and narrow hind margin of first abdominal segment, shining black; a brown spot on mesonotum, forming in one specimen three poorly defined vittæ; prothorax black with a reddish spot in front of humeri; hairs on thorax and abdomen short and yellow; first and second abdominal segments each about twice as long as their width at apex; claws small, black, with a small basal tooth and two very minute ones in middle; fore basitarsi to their tibiæ as 4 to 4.5. Wings strongly tinged with yellow; veins black, base of all veins and whole of subcostal vein yellow; subcosta ending on the costa at fully half length of basal section of radial sector beyond its base; humeral crossvein, petiole of media and R_{2+3} of about equal length, the latter a little oblique and ending $2\frac{1}{2}$ times its length from tip of R_1 ; a narrow dark brown cloud covers basal two-thirds of basal section of radial sector; a brown crossband from the costa, reaching tip of R_4 , extends back to middle of cell M_{1+2} but leaves base of the cell clear; a narrow cloud along basal part of M_3 vein; a lighter cloud at apex of wing extending from tip of R_{4+5} to tip of Cu_1 .

Male: Length 8-11 mm. The allotype has the pleuræ, including the whole of prothorax, scutellum and whole of first basal segment black; hypopygium as figured by Dr. Johannsen in Bulletin 172, 1909, figure 97 and wing as figure 88; abdomen with sides of apical segments yellow.

Color of female differs somewhat, the pleuræ in one female being much darker and first abdominal segment mostly black. Described from three females and three males.

Type: Female, No. 2477, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, April 18, 1925, at Mill Valley, Marin Co., California. Allotype, male, No. 2478, taken by E. C. Van Dyke June 10, 1920, at Yosemite Valley, California. Paratypes, one male taken by M. C. Van Duzee, April 11, 1926, at Mill Valley, California; one male taken by E. P. Van Duzee, April 26, 1924, at Lagunitas, Marin Co., California; two females taken by J. A. Kusche, April 30, 1910, at Sobre Vista, Sonoma Co., California, and one female taken by E. C. Van Dyke, July 10, 1920, at North Bend, King Co., Washington.

This is the same as the males Dr. Johannsen had from Nevada that he thought might be the male of *pectoralis* Coquillett, but as we now have three females agreeing with these males in having the subcosta extending beyond the base of the radial sector and all without variation in this character, there seems to be no doubt that it is distinct.

3. *Platyura angustata* Van Duzee, new species

Male: Length 5 mm. Head, thorax and abdomen black, subshining; last four abdominal segments with yellow hind margins; on third, fourth and fifth segments the yellow is wide; humeri and base of wings yellow. Hypopygium (fig. 1) black, (the drawing shows only one of the claspers, which ends in a curved, slightly flattened spur); coxæ and femora yellow; tibiæ brownish yellow, tarsi brown; hairs on fore coxæ black, small, those at tip not much longer; all hair on thorax and abdomen black; claws with a long, sharp-pointed tooth near base; fore basitarsus nearly .88 as long as their tibia, the latter being as 89; joints of fore tarsi as 78-71-47-35-20; of middle ones as 140-51-34-23-18; joints of posterior pair as 121-54-33-25-20. Wings dark gray, tinged with brown, the apex from a little beyond R_{2+3} brownish, more conspicuously so towards the costa; R_{2+3} short and a little oblique; sections of the subcosta somewhat equal; subcostal crossvein twice, and tip of subcosta once, the width of the basal cell proximad of base of radial sector; the latter reaching the costa far before apex of wing; anterior branch of media ending in apex of wing; coalesced part of media as 19, petiole of media as 26. Knob of halteres black.

Female with three distinct black stripes on mesonotum and yellow lines between them; knobs of halteres black as in male, but varying to yellowish brown.

Type: Male, No. 2479, and *allotype*, female, No. 2480, Mus. Calif. Acad. Sci., taken by the author, April 5 and 17, 1926, at **Mill Valley, Marin Co., California**. Fourteen *paratypes* were also taken at same place in April, 1926.

Platyura angustata is very nearly like *scapularis* Johannsen. It varies much in amount of yellow on abdomen; coalesced part of media either a little shorter or even longer than petiole of media and the subcostal crossvein may be either a little before or distinctly beyond middle of subcosta, but differing from *scapularis* in having a longer and more curved spur at tip of claspers; knob of halteres black.

4. *Platyura nigribarba* Van Duzee, new species

Male: Length 5.2 mm.; of wing 4.7 mm. Head, antennæ and hairs of head and eyes, black. Antennæ distinctly flattened, intermediate joints about as long as wide. Thorax, knobs of halteres and abdomen black, the latter subshining; humeri and narrow hind margin of abdominal segments, widest on third and fourth, yellow; hairs on mesonotum black, those on sides long and dense, those on dorsum minute; scutellum with about eight slender, hair-like bristles on margin; hypopygium, its appen-

dages and their hairs, black; claspers horn-like, stout, a little bent, with a hair at their middle on concave side.

Type: Male, No. 2481, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 5, 1924, at Mill Valley, Marin Co., California.

5. *Platyura equalis* Van Duzee, new species

Female: Length 6 mm.; of wing 5.2 mm. Head, mouth parts, thorax, abdomen, and legs yellow, tarsi a little darker; antennæ, except basal two joints, front, except just above the antennæ, and narrow subbasal cross-bands on second to sixth abdominal segments, black; abdominal cross-bands nearly interrupted on dorsum; knobs of halteres brown; four slender bristle-like hairs on margin of scutellum and several on its disk. Intermediate antennal joints slightly longer than wide; tibial spurs black; first joint of fore tarsi .7, second nearly .6 as long as their tibia; claws with a short tooth at base. Wings yellowish with a light brownish cloud at tip of radial sector; R_{2+3} short, slightly oblique, ending in the costa; distance of its tip from R_1 , coalesced part of media, petiole of media, and basal part of radial sector equal; anal vein scarcely reaching the wing margin.

Type: Female, No. 2482, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, June 11, 1925, at Corvallis, Oregon.

6. *Macrocera clavinervis* Van Duzee, new species

Male: Length 6 mm.; of wing the same. Antennæ 12 mm. long, yellow, becoming brownish towards tip; head yellow, vertex brown; face with a few black hairs on lower edge; thorax yellow, three stripes on mesonotum, a spot on the pleuræ at root of wing, lower part of pleuræ, scutellum and center of metanotum, brown; abdomen yellow, more or less blackened at base, last two segments wholly black; hypopygium black, basal joint of claspers yellowish, apical joint brown with black teeth; hairs on thorax, abdomen and hypopygium black. Coxæ, femora, tibiæ and halteres yellow with black hair; tarsi brownish; hind coxæ with long black hairs on posterior surface; first joint of fore tarsi .75, second joint .50 as long as their tibia. Wings grayish; tip of subcosta not reaching as far as coalesced part of radial sector and media; this coalesced portion of equal length with petiole of media; tip of R_1 thickened, yellowish; R_{2+3} about half as long as the base of radial sector, its base opposite the tip of R_1 .

Type: Male, No. 2483, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, July 7, 1919, at Huntington Lake, Fresno Co., California. *Paratype*, one male taken July 10, at same place.



7. *Macrocera hirtipennis* Van Duzee, new species

Male: Length 5 mm.; of wing the same. Head brown; face yellowish; antennæ yellow at base, becoming brown towards tip, more than 7 mm. long. Thorax reddish yellow with slight indications of three reddish stripes, its hair and bristles black; abdomen yellowish, posterior margin of segments black, one or two of apical segments almost wholly black. Claspers brown with two black claws at tip, formed about as usual in the genus. Coxæ, femora and tibiæ yellow; tips of middle and hind coxæ, of hind femora and of middle and hind tibiæ brown; tarsi brownish; fore metatarsi .75 as long, second joint nearly .50 as long as their tibiæ, the tibiæ being as 102, the joints of fore tarsi as 78-48-35-21-14. Knobs of halteres brown, their petiole and base of knob whitish. Wings hairy, more so beyond tip of R_1 ; anterior branch of cubitus where it joins the M-Cu crossvein nearly interrupted, as is also the radial sector where it starts to coalesce with the media; subcostal vein ending before apex of coalescing of radial sector with the media; R_{2+3} three-fourths as long as basal portion of radial sector including the coalesced part. A brown cloud covers petiole of media, but usually broken and faint, and a brown preapical fascia, sometimes very faint, extending across wing from R_{2+3} .

Female: Abdomen blackish with posterior margins of segments yellow; occiput yellow, vertex brown; wings with small brown clouds between the radial sector and base of media; clouds over petiole of media and preapical fascia distinct, although faint. Sometimes a very faint cloud at tip of wing.

Type: Male, No. 2484, and *allotype*, female, No. 2485, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 2, 1919, at Santa Cruz, California. *Paratypes*, seven males and females taken with the type; one male taken by the author at Mill Valley, April 8, 1926, and a pair taken by the author at Berkeley, California, May 16 and 20, 1915.

Hirtipennis is very much like *hirtus* Loew, but in that species the fore tibiæ are as 120 and the joints of fore tarsi as 100-55-20-14-11, making the basitarsus of the new form about .76 as long as their tibia, while in *hirtus* the basitarsus is .83 as long as their tibia.

8. *Tetragoneura longicauda* Van Duzee, new species

Male: Length 3.5 mm. Head, face and antennæ brown, scape of antennæ and palpi yellow; antennæ as long as abdomen, its hair long. Thorax yellow, pleuræ sometimes infuscated; mesonotum with three coalesced black stripes; scutellum reddish yellow with base black. Ab-

domen black, with long, scattering, yellowish hairs. Hypopygium (fig. 2) large, yellow, the long claspers partly infuscated. Halteres, coxæ and femora yellow; coxæ with yellow hair; tibiæ yellowish brown, trochanters and tarsi brown; fore tibiæ as 109; joints of fore tarsi as 101-46-25-14-12; joints of hind tarsi as 84-32-21-18-10. Wings nearly hyaline; cell R_1 very small, about as long as wide, placed beyond middle of wing; subcostal vein running very close to the radius and ending in it at a little more than half length of basal cell; petiole of media and R-M crossvein of nearly equal length, the former in nearly same line as R_{4+5} ; costâ extending beyond tip of R_{4+5} nearly half distance to tip of first branch of media; cubitus forking just before proximad end of R-M crossvein; anal veins distinct, quite long.

Female like the male except that cell R_1 is a little longer than wide, the antennæ a little shorter and abdomen more brown or reddish brown; ovipositor yellow.

Type: Male, No. 2486, and *allotype*, female, No. 2487, Mus. Calif. Acad. Sci., taken by the author March 13, 1926, at Mill Valley, Marin Co., California. *Paratypes*, one pair taken with the types.

This form differs from most species of the genus in having the anal veins conspicuous but not reaching the wing margin, the male forceps long and the tibiæ nearly bare, the setæ of posterior tibiæ being very minute, but I see no reason to separate it from the genus.

9. *Sciophila nitida* Van Duzee, new species

Male: Length 4 mm.; of wing 4.2 mm. Head, thorax, scutellum, abdomen and hypopygium black, quite shining; hairs on front, face, thorax, abdomen, halteres, coxæ and femora yellowish white, those on sides of mesonotum, margin of scutellum, sides and apical segments of abdomen long; hairs on upper part of sides of hypopygium long and deep black; antennæ black, scape yellow, intermediate joints twice as long as wide; coxæ, femora, tibiæ and tibial spurs yellow; tarsi yellowish at base, becoming brown apically; hypopygium large, its claspers small, yellowish with long black hair; inferior claspers with one long blunt bristle. Fore tibiæ without setæ, middle ones with two small ones on lower posterior surface and hind ones with four on upper anterior surface. Wings grayish; four times as long as the fore tibiæ; anterior veins brown, posterior yellow; media forking close to the crossvein; cubitus forking as far beyond the crossvein as length of its posterior branch; Cell R_1 small, square, subcostal crossvein placed near its outer end; subcosta ending in the costa the length of the cell R_1 beyond that cell; anal vein ending just beyond the fork of the cubitus.

Type: Male, No. 2488, Mus. Calif. Acad. Sci., taken by Mr. C. L. Fox, July 12, 1923, in the **Giant Forest, Tulare Co., California.**

10. *Mycomya hirticauda* Van Duzee, new species

Male: Length 4 mm. Head and antennæ dark brown; face, palpi, scape and first joint of flagellum yellow; basal joints of flagellum nearly twice as long as wide. Thorax wholly yellow or brownish yellow on dorsum, its hairs and bristles black, but some long hairs on sides more yellowish in certain lights. Abdomen shining black with hind margins of first five segments yellow, yellow margins of third, fourth and fifth segments wide, sixth segment wholly black; hairs on dorsum of abdomen short and yellowish. Hypopygium (fig. 3) brown, its superior claspers long and black with long black hair at tip on inner surface. Coxæ and femora yellow; fore coxæ with quite long black hair; spur of middle coxæ curved, about as long as coxa; all femora with a row of long black hairs below; tibiæ brownish yellow; setæ of posterior pair about as long as their diameter; tarsi brown; fore tibiæ as 84; joints of fore tarsi as 73-60-42-27-18; joints of middle tarsi as 80-48-30-20-16; those of posterior pair as 85-40-24-15-13. Wings with R_{4+5} ending in apex of wing; subcostal vein ending in the costa opposite or beyond distal end of small cell R_1 , which is a little longer than wide and faintly tinged with brown; subcostal crossvein entering the small cell R_1 near its middle; petiole of the media 48, M_1 75, and M_2 60 fiftieths of a millimeter long; the cubitus forking distinctly before the R-M crossvein.

Female colored as in male, except that sixth abdominal segment has a narrow yellowish posterior margin; wings as in the male; lamellæ at tip of abdomen yellow. Described from two males and six females taken by the author.

Type: Male, No. 2489, Mus. Calif. Acad. Sci., taken March 6, 1926, *allotype*, female, No. 2490, Mus. Calif. Acad. Sci., taken March 11, 1926, both at **Mill Valley, Marin Co., California.** *Paratypes*, one male and five females taken with the types.

11. *Mycomya fulvitibia* Van Duzee, new species

Male: Length 3.5 mm. Head and antennæ brown; face, palpi, scape and first joint of flagellum yellow. Thorax wholly yellow, including the pleuræ, scutellum and metanotum; rarely with the scutellum brownish and with brownish stripes on dorsum of thorax; hairs of thorax and abdomen yellow; bristles of thorax black. First two abdominal segments yellow with a black spot on dorsum, that on first small; remainder of abdomen black on dorsum and on venter of sixth segment; third, fourth

and fifth segments with wide, yellow posterior margins, sixth wholly black. Hypopygium (fig. 4) reddish; two pairs of straight median appendages and pair of long, cruciate bristles are the most striking characters. Coxæ, femora and halteres yellow; fore coxæ with quite long yellow hair; middle coxæ with a straight spur about as long as coxa; hind femora with a row of long yellow hairs below; tibiæ brownish yellow, bristles of posterior pair not as long as diameter of tibia; tarsi dark brown; length of fore tibiæ as 130, joints of fore tarsi as 90-44-25-16-12; joints of posterior tarsi as 90-40 19-6-6. Wings with R_{4+5} ending in the apex; subcostal vein ending in the costa, its crossvein entering the small cell R_1 at about its basal fourth, the small cell four times as long as wide and pointed at middle of its basal end; petiole of media 52, M_1 79 and M_2 65 fiftieths of a millimeter long; the cubitus forking opposite middle of small cell R_1 .

Female nearly like male in color, except that sixth segment of abdomen is narrowly yellow on apical margin; lamellæ at tip of abdomen brown; venation of wing as in male except that the subcostal crossvein is at basal third of the small cell R_1 .

Type: Male, No. 2491, Mus. Calif. Acad. Sci., taken by the author, March 13, 1926, at Mill Valley, Marin Co., California. *Allotype*, female, No. 2492, Mus. Calif. Acad. Sci., taken by author April 25, 1926, at Mill Valley. *Paratypes*, three specimens taken at same time and place as types.

12. *Mycomya nigrihirta* Van Duzee, new species.

Male: Length 4.5 mm. Head, including the face, palpi and first four antennal joints yellow, front black in center. Thorax subshining, yellow, with three reddish brown stripes, its bristles and many of the small hairs black; hairs on abdomen yellow. Abdomen subshining yellow, first five segments with a large black spot on the dorsum, which reaches nearly their entire length, but leaves the posterior margin yellow; sixth segment black with a narrow, yellow posterior margin. Hypopygium (fig. 5) yellow, black only at base above; with a pair of long yellow appendages and two long straight bristles. Coxæ, femora and halteres yellow; tibiæ yellowish brown, tarsi brown; middle coxæ with a long, yellow, slender, curved spur, which is nearly as long as the coxa; fore coxæ with long, bristly, black hairs; posterior coxæ with a brown spot on outer surface, their black bristles longer than thickness of coxa; femora with a few long black hairs below; bristles of hind tibiæ about as long as diameter of tibia; length of fore tibiæ as 105; joints of fore tarsi as 93-75-43-28-19; those of middle ones as 103-46-27-19-16; joints of posterior pair as 96-50-29-19-16. R_{4+5} ending in apex of wing; subcostal vein ending in the costa opposite end of its crossvein, which is placed at middle of small cell R_1 , this cell being just twice as long as wide; petiole of

media 53, M_1 99, M_2 72 fiftieths of a millimeter long; cubitus forking a little before the R-M crossvein.

Type: Male, No. 2493, Mus. Calif. Acad. Sci., taken by the author, May 23, 1915, at Berkeley, California; one female, *allotype*, taken at same time and place in collection of the author.

13. *Mycomya californica* Van Duzee, new species

Male: Length 4.5 mm. Head brown; face, palpi and first joint of flagellum yellow, other joints of antennæ brown, basal joints of flagellum twice as long as wide. Thorax yellow with three coalesced, dark brown stripes, which cover most of dorsum; metanotum and a large spot on lower part of pleuræ brown; scutellum yellowish brown with one pair of marginal bristles; hairs on thorax and abdomen yellow, bristles black. Abdomen dark brown with hind margin of third to sixth segments narrowly yellow. Hypopygium (fig. 6) largely yellow (the drawing is partly a side view, the lower projection is yellow with three short hairs at tip, but the position in the figure does not show the character very well). Coxæ yellow, middle and hind pairs with a brown patch on outer surface, their hairs mostly black; spurs of middle coxæ as long as the coxa, slender, curved, pale yellow; femora yellow, middle pair with long hairs below; tibiæ and tarsi brown; posterior tibiæ with very short setæ; fore tibiæ 97, joints of fore tarsi as 109-71-45-24-13; those of middle ones as 104-44-26-14-10; joints of posterior pair as 105-50-26-15-12. Halteres yellow. Wings with R_{4+5} ending in the apex; the subcostal vein ending free, its crossvein near end and placed near middle of small cell R_1 which is three times as long as wide; petiole of media 56, first branch of media 94, second branch 65 fiftieths of a millimeter long; cubitus forking slightly before the R-M crossvein.

Female: One female, probably belonging with this male, agrees with it in wing characters and in having the fore basitarsus a little longer than their tibia.

Type: Male, and *allotype*, female, in the author's collection, taken by him, February 20, 1926, at Mill Valley, Marin Co., California.

14. *Mycomya fuscipalpis* Van Duzee, new species

Male: Length 4.2 mm. Head, including face and palpi, blackish brown; antennæ blackish, first joint of scape brownish yellow, second joint and base of flagellum yellow. Thorax blackish brown with brown pollen between the three shining vittæ, the posterior end of these vittæ and the corners of the scutellum whitish; scutellum with one pair of

long marginal bristles; hairs of thorax black, those of abdomen more yellowish. Abdomen blackish, shining, hind margins of segments narrowly dark yellow, yellow margins on second and third segments wider than on others. Hypopygium (fig. 7) with a row of blunt spines between lateral flaps or claspers. Halteres yellow. Coxæ brownish yellow with black hair, spurs of middle pair about one-fourth as long as the coxa, hook-like, black at base, apical half yellow; femora yellow; black hairs on lower anterior edge of middle femora about as long as width of femora; fore tibiæ yellow, middle and hind pairs more brown; setæ on posterior tibiæ not as long as their diameter; tarsi dark brown; fore tibiæ as 100; joints of fore tarsi as 81-51-35-23-19; those of middle ones as 84-45-28-19-16; joints of posterior pair as 93-42-27-18-16. R_{4+5} ending in apex of wing; subcostal vein ending in costa beyond middle of small cell R_1 , its crossvein being placed at middle of that cell, which is 1.8 times as long as wide; petiole of media five times as long as the R-M crossvein, it being 55, first branch of media 95 and second branch 80 fiftieths of a millimeter long; the cubitus forking a little before the R-M crossvein.

Type: Male, in the author's collection, taken by him March 6, 1926, at Mill Valley, Marin Co., California.

15. *Mycomya longispina* Van Duzee, new species

Male: Length 4-4.5 mm. Head brown; face, palpi, first three antennal joints, halteres, coxæ and femora yellow; basal joints of antennal flagellum about twice as long as wide. Thorax yellow or reddish yellow subshining with more or less distinct reddish brown or brown vittæ; scutellum, metanotum and pleuræ reddish yellow; abdomen shining, blackish brown; first five segments with yellow posterior margins; sixth segment wholly black; hairs of thorax and abdomen pale; bristles of thorax black, the four marginal bristles on scutellum yellowish brown. Hypopygium (fig. 8) dark reddish yellow, its most conspicuous character being the long black bristle arising from the terminal tubercle on the claspers and a sharply bent one near the base. Fore coxæ with minute yellow hair, posterior pair a little brown on outer surface and with a few long black bristles; middle coxæ with a slender spur, which is nearly straight, except at tip and as long as the coxa; anterior femora nearly bare below, middle and hind ones with long black hairs below; tibiæ and tarsi brown; setæ of posterior tibiæ very minute; fore tibiæ as 103; joints of fore tarsi as 95-50-31-19-12; those of middle ones as 92-39-23-14-12; joints of posterior pair as 86-34-20-12-10. Wings; R_{4+5} ending in apex of wing; the subcosta ending in the costa opposite end of its crossvein, which is placed before basal third of small cell R_1 , and is three times as long as wide; petiole of media 55, first branch of media 81 and second 63 fiftieths of a millimeter long; the cubitus forking beyond the R-M crossvein.

Female almost like male, except that the subcostal vein reaches the costa beyond the tip of its crossvein, which is sometimes placed nearer middle of small cell, and the petiole of the media is a little shorter.

Type: Male, No. 2494, and *allotype*, female, No. 2495, Mus. Calif. Acad. Sci., taken by the author, March 13, 1926, at Mill Valley, Marin Co., California. Eleven *paratypes* also were taken by the author at same place between February 27 and March 21.

16. *Mycomya abbreviata* Van Duzee, new species

Male: Length 4-4.5 mm. Head brown; face brown above, its lower three-fourths more or less yellow; palpi, scape of antennæ and basal joint of flagellum pale yellow, remaining joints of flagellum brown, its basal joints about twice as long as wide. Thorax brown with gray pollen, omitting a more shining median vitta, which runs to a point posteriorly; scutellum yellowish brown; metanotum and lower half of pleuræ brown, upper half of pleuræ and large spots on the humeri yellow; hairs and bristles of thorax and abdomen black; abdomen brown above, posterior margins of segments more yellowish; venter and lower portion of sides yellow. Hypopygium (fig. 9) and its appendages mostly black, but with two yellow, projecting organs, seen on right hand of figure; coxæ, femora and halteres yellow; middle and hind coxæ each with a brown spot on outer surface, posterior pair with black bristles as long as their diameter; fore coxæ with small black hairs and black bristles; middle coxæ with a long, slender, curved, whitish spur, which is as long as the coxa; all femora with a row of long black hairs below; setæ of posterior tibiæ shorter than their diameter; tibiæ and tarsi brown; anterior tibiæ as 117; joints of fore tarsi as 138-77-48-28-19; of middle tarsi as 108-55-31-21-16; joints of posterior tarsi as 119-51-30-18-14. R_{4+5} ending in apex of wing; subcosta ending free, its crossvein near the end and placed just before middle of the small cell R_1 , which is nearly two and a half times as long as wide; petiole of media 58, anterior branch of media 105, and posterior branch 85, fiftieths of a millimeter long; the cubitus forking under the proximal end of the R-M crossvein.

Female about as in male, but hairs on under side of femora shorter, except on middle ones; the fore basitarsi appear a little longer in proportion to the tibiæ; the thorax is often more yellow with brown vittæ, and the abdominal segments have hind margins distinctly yellow. Described from three males and 10 females.

Type: Male, No. 2496, and *allotype*, female, No. 2497, Mus. Calif. Acad. Sci., taken by the author, March 13, 1926, at Mill Valley, Marin Co., California; all *paratypes* were taken same day and place, except one male, which was taken by the author, March 25, 1926, at San Francisco, California.

17. *Trichonta fusciventris* Van Duzee, new species

Length 3 mm. Brownish black; humeri a little yellow; face, palpi, scape of antennæ, fore coxæ and femora, except the extreme tips, yellow; middle and hind coxæ and tibiæ yellowish brown. Hypopygium (fig. 10) large, its claspers with a long bristle at tip, inner surface of outer lobes with a few stout, short, bristles inserted on little conical tubercles; hind coxæ without a basal seta; hind tibiæ without bristles; anterior femora as 22; their tibiæ as 26; joints of anterior tarsi as 21-11-8-5-5. Wings grayish, slightly tinged with brown on apical third; subcostal vein long, running close to R_1 and nearly if not quite uniting with it at tip beyond middle of basal cell; cubitus forking about opposite middle of petiole of media; anal vein ending a little before fork of cubitus; costa ending at or a very little beyond tip of radial sector; setulæ of wings not arranged in distinct rows. Lateral ocelli close to eye margin, middle one minute, placed in a groove near antennæ.

Type: A unique male, in the author's collection, taken by him, March 13, 1926, at Mill Valley, Marin Co., California.

18. *Polylepta modesta* Van Duzee, new species

Female: Length 4 mm.; of wing 4.2 mm. Head and face black; palpi brown; antennæ yellowish brown, yellow at base; second joint of scape with a long bristle, intermediate joints three to four times as long as wide; ocelli forming a rather high triangle. Dorsum of thorax yellow with three broad brown stripes; scutellum brown, pleuræ more blackish; abdomen black with rather wide yellowish hind margins to the segments; hairs and bristles of thorax and abdomen black; halteres, fore coxæ, femora and tibiæ yellow, middle and hind coxæ darker; tarsi dark yellowish; fore coxæ with long, black, bristle-like hairs, posterior ones with three black, rather long hairs on apical half of outer surface; trochanters yellow with a black spot below, anterior ones with a black bristle; tibial spurs black, small; fore tibiæ without setæ, those of middle and hind tibiæ very small. Wings grayish; R_{4+5} gently bent back at tip, ending in the apex of wing, the costa not prolonged beyond its tip; small cell R about $1\frac{1}{2}$ times as long as wide, wider in front than posteriorly, both short veins being a little oblique; subcostal crossvein placed at basal third of small cell, the subcosta ending abruptly at crossvein; petiole of media fully as long as its anterior branch; the cubitus forking under base of radial sector, its petiole about equal in length to its anterior branch; anal vein weak, ending nearly under the fork of the cubitus.

Type: Female, No. 2498, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, March 24, 1919, at Carmel, California.

19. *Neuratelia flexa* Van Duzee, new species

Male: Length 5 mm. Head dull black; scape of antennæ, lower edge of face and palpi yellow, remainder of antennæ blackish. Thorax and abdomen subshining, black; pleural suture very narrowly yellow, root of wing yellowish; all hairs and bristles of thorax, abdomen and coxæ yellow; hind coxæ with one long and a very short basal seta. Hypopygium black (fig. 11), small, with short claspers. Coxæ and femora yellow, tibiæ darker yellow, tarsi brown; tips of posterior femora above and narrow tips of their tibiæ brownish; fore basitarsus 1.19 times as long as their tibia, the tibiæ being as 95; joints of fore tarsi as 113-64-44-24-15; those of posterior tarsi as 77-54-32-17-10. Halteres yellow with a blackish brown knob. Wings dark grayish; subcostal vein extending about one-third its length beyond the base of radial sector and slightly further than fork of cubitus; base of radial sector and the R-M crossvein of nearly equal length; radial sector much bent, the costa not or scarcely extending beyond its tip; apex of the wing half-way between tip of radial sector and tip of anterior branch of media (about as Dr. Johannsen figures the wing of *silvatica* Johannsen); first anal vein ending quite abruptly, nearly opposite basal third of posterior branch of the cubitus; subcostal crossvein indistinct.

Type: Male, taken by the author, April 21, 1926, at Mill Valley, Marin Co., California, in author's collection.

This would run to *silvatica* in Dr. Johannsen's table of species (*Fungus Flies of North America*, Part iii, p. 262) but differs from that species in the shorter claspers, black knob of the halteres and in having the basi-tarsi less than one-fifth longer than the tibiæ, not one-fourth longer as in *silvatica*; the bend in the radial sector is also slightly less than in that species.

20. *Boletina crassicauda* Van Duzee, new species

Male: Length 5-6 mm.; of wing 5-5.5 mm. Head black; palpi yellow; antennæ black, basal two joints yellow, intermediate joints four times as long as wide. Thorax and abdomen dull black with all hair and bristles yellow and rather long; humeri and halteres yellow, sometimes the posterior edge of several segments of abdomen very narrowly whitish. Hypopygium large, black; claspers long, flattened on basal two-thirds, with many black hairs on edge and pale hairs on outer surface, with a rather sharp bend near tip, on and beyond which there are no hairs. Coxæ, femora and tibiæ yellow; tarsi infuscated; trochanters black; tibial spurs yellow; fore tarsi fully twice as long as their tibiæ, posterior ones a little longer than their tibiæ; claws with a tooth at base. Wings grayish; costa slightly extending beyond tip of R_{1+2} ; cubitus forking opposite

end of the R-M crossvein; subcostal vein ending in the costa opposite base of radial sector; petiole of media and R-M crossvein of equal length.

Female like male in color and wing characters. Ovipositor yellowish.

Type: Male, No. 2499, and *allotype*, female, No. 2500, Mus. Calif. Acad. Sci., collected by Dr. G. Dallas Hanna, September 10, 1920, at **Unalaska, Alaska**. *Paratypes*, seven males, same data.

Runs to *Boletina nacta* Johnn. in his table of species but differs in form of claspers, and in having the palpi, humeri, and two basal joints of antennæ yellow.

21. *Boletina atra* Van Duzee, new species

Male: Length 3.5-4.5 mm.; of wing 3.5-4 mm. Head, thorax, abdomen and antennæ wholly black and rather dull; hind coxæ, more or less of middle pair, and all trochanters blackish; tarsi and knees brown, the first tarsal joints more yellowish; palpi, a very small spot back of humeri, halteres, fore coxæ, all femora, tibiæ and tibial spurs, yellow; all hairs and bristles, except those on tibiæ and tarsi white or pale yellow. Mesonotum with a little gray pollen, which leaves three broad black stripes, the middle one divided by a gray line; intermediate antennal joints $4\frac{1}{2}$ times as long as wide. Hypopygium large, oval; forceps rather short, rounded in general outline, but divided on inner side into two nearly equal parts, with long hair on outer surface, which is bent so as to follow its curve. Last two joints of posterior tarsi slightly widened; anterior basitarsi eight-elevenths as long as their tibia.

Wings nearly hyaline; veins brown; subcostal vein yellow, ending opposite base of radial sector, its crossvein just before its middle; petiole of media and R-M crossvein of about equal length; cubitus forking opposite proximal end of R-M crossvein; costa extending more than a third of distance from tip of radial sector to anterior branch of media; anal vein reaching as far beyond fork of cubitus as length of R-M crossvein.

Female: Like the male, except that the abdominal segments have narrow yellowish hind margins and the thorax and abdomen are more shining.

Type: Male, No. 2501, and *allotype*, No. 2502, Mus. Calif. Acad. Sci., collected by J. August Kusche, May 15 and 12 respectively, at **Skagway, Alaska**. *Paratypes*, 10 specimens taken by Mr. Kusche at same place from May 6 to 18, 1923, and one taken by Dr. E. C. Van Dyke at Unalaska, July 4, 1907.

22. *Leia nigricornis* Van Duzee, new species

Female: Length 4 mm.; of wing the same. Head and antennæ black, the antennal scape sometimes yellowish; palpi yellow. Thorax and scutellum shining black; abdomen black, subshining; all hairs and bristles of thorax, abdomen and fore coxæ yellow, bristles on posterior edge of mesonotum and scutellum long. Coxæ, femora and tibiæ yellow; tips of posterior coxæ and femora and a line on lower edge of the femora at base black; tarsi brown; fore coxæ with long yellow hair; tibial spurs yellow; first four joints of fore tarsi as 51-28-22-9; joints of middle tarsi as 63-33-29-14-13; halteres yellow. Wings grayish; cubitus forking proximad of basal end of R-M crossvein; petiole of media as 35, R-M crossvein as 52; subcostal vein ending in the costa at middle of basal cell (cell R), its crossvein a little before its tip; base of radial sector short, crossvein-like, placed at right angles to radial sector and half length of R-M crossvein from tip of R_1 ; a preapical crossband at middle of radial sector, about half as wide at costa as length of apical part of radial sector, narrowing posteriorly and ending at tip of anterior branch of cubitus; with a slight cloud back of posterior branch of cubitus and sometimes one at fork of media.

Type: Female, No. 2503, Mus. Calif. Acad. Sci., taken by G. Dallas Hanna, September 10, 1920, at Unalaska, Alaska. One *paratype* was taken at the same time and place.

23. *Docosia defecta* Van Duzee, new species

Female: Length 2.5 mm. Thorax, head and abdomen dark brown; first two joints of antennæ, palpi, halteres, coxæ, femora and tibiæ dusky yellow; tips of femora and tibiæ, tibial spurs and tarsi brown; bristles of thorax small, black; minute hairs on thorax and abdomen pale. Joints of fore tarsi as 42-30-21-15-10; of middle ones as 45-26-17-10-8; those of posterior pair as 50-21-14-10-8. Wings grayish; costa extending fully half the distance from R_{4+5} to M_{1+2} ; base of radial sector and petiole of media of equal length; R-M crossvein and forks of media and cubitus about equally distant from root of wing; subcostal vein wholly wanting.

Type: Female, in the author's collection, taken by him February 13, 1926, at Mill Valley, Marin Co., California.

24. *Docosia dialata* Van Duzee, new species

Male: Length 3 mm.; of wing 4 mm. Black; palpi and halteres yellow; fore coxæ, femora, tibiæ and their spurs yellowish with more or less infuscation, sometimes posterior legs wholly black; hair of antennæ, thorax, abdomen, legs, and hypopygium white, short and sparse on dorsum of abdomen, but longer on last segment; hypopygium, fore coxæ and

venter of fourth segment with long erect, whitish hairs; bristles on sides of mesonotum and margin of scutellum black; hypopygial claspers yellowish; intermediate antennal joints longer than wide. Fore tibiæ as 36, their tarsal joints as 22-9-6-5-8, the joints beginning with second gradually widened, the fifth being 8 long to 6 wide, the last three joints short, petiolate. Wings grayish; posterior veins thin; subcostal vein ending in R_1 , a little beyond middle of small cell R; R-M crossvein half as long as distance from base of radial sector to tip of R_1 ; petiole of media shorter than the R-M crossvein; cubitus forking under fork of media; anal vein represented by a slight fold in wing.

Female wholly black except petiole of halteres; sometimes the palpi and knobs of halteres a little brownish yellow; hairs on abdomen all short and quite abundant; posterior wing veins stronger; fore tarsi plain; fore tibiæ as 49, their tarsal joints as 36-17-15-9-9; otherwise as in the male.

Type: Male, No. 2504, and *allotype*, female, No. 2505, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, April 4, 1920, in Moraga Valley, Contra Costa County, California. *Paratypes*, one pair taken with the types and two females taken by the author at Mill Valley, Marin Co., California, March 13, 1926.

25. *Brachypeza brevitibia* Van Duzee, new species

Dark yellowish with three indistinct brown stripes on the mesonotum and more or less distinct saddles on the abdominal segments, apical segments mostly black; head and face black; antennæ wholly yellow, short, stout; basal two joints with black bristles, hairs on remainder white; scutellum black; hairs on the dorsum of thorax small, white, those on the sides and bristles of scutellum black; halteres yellow. Coxæ and femora yellow with minute pale hairs; tibiæ more brownish yellow; tarsi brown; fore femora one-fourth as wide as long; hind femora five times as long as wide; fore basitarsi 1.6, fore tibiæ 1.3 times as long as spur of fore tibia; posterior basitarsi 1.5 times as long as spur of their tibia. Wings grayish, unspotted; cubitus forking a little before the fork of the media; petiole of media half as long as its posterior branch, which does not reach the wing margin.

Type: Female, No. 2506, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 15, 1924, at Mill Valley, Marin Co., California.

26. *Rhymosia spinicauda* Van Duzee, new species

Male: Length 4 mm. Head and thorax black, but thickly covered with whitish pollen so as to conceal the ground color when viewed obliquely, this pollen coarse and its scales large; face, palpi, scape of an-

tennæ, pleuræ and humeri yellow; lower edge of pleuræ, scutellum and metanotum blackish. Abdomen black; sides of segments with large yellow triangles posteriorly, which meet on the dorsum and form a narrow hind margin on upper surface of the segments; minute hairs on abdomen pale. Hypopygium (fig. 12) large, yellow, with a pair of rounded black appendages, which are covered with bristles. Coxæ and femora yellow, tibiæ brownish yellow, tarsi brownish black; setæ of posterior tibiæ about as long as diameter of tibia; basal seta of hind coxæ conspicuous; fore tibiæ as 63; joints of fore tarsi as 75-51-40-27-19; joints of middle ones as 82-45-33-21-17; those on posterior pair as 88-35-25-18-14; halteres pale yellow. Wings tinged with yellowish brown; cubitus forking at proximal end of R-M crossvein; subcosta short, ending free; petiole of media as 11, R-M crossvein as 15; first anal vein ending nearly opposite the fork of the cubitus, second anal vein of about same length and nearly parallel with wing margin; radial sector nearly straight, ending in tip of costa before apex of wing.

Type: Male, in the author's collection, taken by him, March 13, 1926, at Mill Valley, Marin Co., California.

This species can be recognized by its black thorax covered with coarse white pollen, and the black spiny claspers.

27. *Rhymosia parvicauda* Van Duzec, new species

Head, including face, yellowish brown; palpi and scape of antennæ yellow, remainder of antennæ mostly brown; antennæ $1\frac{1}{2}$ times as long as thorax and head together; thorax including most of the pleuræ, scutellum and metanotum brown; the small hairs on thorax, abdomen and fore coxæ black, but those on abdomen appear more yellowish in certain lights. Abdomen black, second to fifth segments with a broad yellow band at base, which is of nearly equal width on both sides and dorsum of abdomen. Hypopygium (fig. 13) small, yellow; claspers small, black, furcate, there is also a pair of curved, spur-like appendages below; halteres, coxæ and femora yellow, tibiæ and tarsi brown; setæ of posterior tibiæ and basal seta of hind coxæ scarcely as long as diameter of tibia; fore tibiæ as 64; joints of fore tarsi as 67-47-39-28-20, of middle tarsi as 79-44-34-25-17, those of posterior pair as 85-36-24-17-11. Wings dark gray; fork of cubitus a little before the basal end of R-M crossvein; subcostal vein short, ending free; radial sector gently bent backward at tip, ending in tip of costa before apex of wing; first anal vein ending near basal third of posterior branch of the cubitus, second anal vein of nearly equal length; R-M crossvein as 17 and petiole of media as 10.

Female colored as in male and venation about same; fore tibiæ only a little shorter than the fore basitarsi.

Type: Male, No. 2507, Mus. Calif. Acad. Sci., taken by the author March 25, 1926, at Mill Valley, Marin Co., California; *allotype*, female, in the author's collection, taken February 21, 1926, at same place. One male *paratype* also was taken by the author, March 1, 1926, at the same location.

This form is easily separated from related species by the wide, yellow, basal bands on the abdominal segments being of equal width throughout, the furcate claspers and the wing characters.

28. *Rhymosia plumosa* Van Duzee, new species

Male: Length 4.5-5.5 mm. Head and thorax reddish yellow, sometimes almost yellow; posterior part of pleuræ with long black hair; small hairs on front, thorax, and fore coxæ black, those on the abdomen mostly pale; palpi yellow; first four joints of antennæ yellow, remainder brown. Abdomen yellow, first five segments with a black, triangular saddle above, which extends along apical margin and reaches beyond middle of segment on dorsal line; sixth segment black. Hypopygium (fig. 14) yellow with three large, yellow, thin appendages; these usually recumbent and not conspicuous as shown in the drawing; there is also a pair of long, slender, hairy appendages above these; below them is another pair of similar appendages (fig. 15) which have a small fork or blunt tooth on the enlarged basal portion, when seen from the side they appear as in figure 16, the fork being concealed. Coxæ and femora yellow, tibiæ and tarsi more brown; middle and hind coxæ with more or less conspicuous brown streaks; bristles of hind tibiæ minute; basal seta of posterior coxæ conspicuous; fore tibiæ as 101; joints of fore tarsi as 119-83-56-35-21; joints of middle ones as 128-70-49-30-22; of posterior pair as 122-52-28-20-15. Knobs of halteres dark brown, petiole whitish. Wings grayish; radial sector bent backward so as to meet tip of costa a little before apex of wing; first anal vein ending abruptly at about middle of posterior branch of cubitus; second anal vein slender, running nearly parallel with hind margin of wing and about $\frac{3}{4}$ as long as first anal vein; subcostal vein short, ending free; cubitus forking length of petiole of media before proximal end of R-M crossvein; petiole of media as 16, R-M crossvein as 15.

Female almost like the male in color and wing characters.

Type: Male, No. 2508, Mus. Calif. Acad. Sci., taken by the author, March 1, 1926, at Mill Valley, Marin Co., California; *allotype*, female, No. 2509, Mus. Calif. Acad. Sci., taken by the author, April 1, 1926, at the same location. Five *paratypes* were taken at same place, between February 20 and April 5, 1926.

29. *Allodia cincta* Van Duzee, new species

Female: Length 2 mm. Fuscus, scape of antennæ, palpi, part of venter, posterior margin of abdominal segments, halteres, coxæ and femora yellow; tibiæ, tibial spurs and tarsi brownish yellow. Scutellum with one pair of bristles; hind coxæ with one yellowish basal seta. Fore coxæ as 14, femora 15, tibiæ 15 and the joints of fore tarsi as 12-8-6-4-4. Wings grayish; cubitus forking slightly proximad of the basal end of the R-M crossvein.

Type in the author's collection, taken by him, May 22, 1915, at **San Francisco, California.**

This species would run to the unnamed species No. 11 in O. A. Johannsen's *Fungus Flies of North America*, part iii, p. 320 and it probably is that species, although it is much smaller than was his specimen.

30. *Allodia hirticauda* Van Duzee, new species

Male: Length 4-4.5 mm. Head black; face yellowish; palpi and scape of antennæ yellow, first four joints beyond scape yellow below. Dorsum of thorax brown, front edge, especially at humeri yellow; propleuræ yellow with four black bristles above each fore coxa; a yellow spot below wing; scutellum with four marginal bristles. Abdomen black, venter of first four segments, hind margins of first five segments, and most of genitalia yellow. Coxæ and femora yellow, middle and hind femora with a brown spot below at base and with their tips more or less brown; posterior coxæ with a black streak at tip; all trochanters with a black spot below; tarsi blackened almost to their base; fore coxæ as 25, femora 30, tibiæ 28 and the joints of fore tarsi as 30-23-18-13-7. Halteres yellow. Wings tinged with brown; petiole of media slightly longer than R-M crossvein; cubitus forking just before the fork of the media; subcostal vein short, straight, ending free. Lower claspers of hypopygium (fig. 17) hairy to their tips, where the hair is longest.

The female has the fore tibia as 26, joints of fore tarsi as 23-17-13-10-8; antennæ wholly brown, except the scape; basal joints of the flagellum much widened.

Type: Male, No. 2510, and *allotype*, female, No. 2511, Mus. Calif. Acad. Sci., taken by the author, March 6, 1926, at **Mill Valley, Marin Co., California.** The author also took one *paratype* at same place March 13 and one at Berkeley, Calif., May 28, 1915.

This is colored like *Allodia crassicornis* Stannius, but differs in having the lower claspers with long hair at their tips,

in *crassicornis* these claspers are bare for a short distance at the tip.

31. *Phronia basalis* Van Duzee, new species

Male: Length 3 mm. Head and antennæ brown, antennal scape, face and palpi yellow; third antennal joint scarcely twice as long as wide. Thorax brown, humeri and prothorax yellow. Abdomen black, basal segments largely yellow on sides; last segment and hypopygium yellowish brown; all hairs of thorax, abdomen and fore coxæ yellow. Hypopygium (fig. 18) small, with small appendages; fore and middle coxæ and all femora and tibiæ yellow, posterior femora and tibiæ conspicuously blackened at tip; tarsi brown; posterior coxæ largely brown, without a basal seta; bristles of hind tibiæ not as long as diameter of tibia; fore tibiæ as 52; joints of fore tarsi as 49-30-18-13-9; those of middle ones as 44-21-15-11-9; first two joints of posterior tarsi as 50-17. Halteres pale yellow. Wings grayish; costa produced but little beyond tip of radial sector; R-M crossvein placed at an angle with radial sector; cubitus forking a little more than half length of its posterior branch beyond fork of media; petiole of cubitus as 70, its anterior branch as 53, and posterior branch as 35; R-M crossvein as 10, petiole of media as 12.

Female: Abdomen black with narrow yellow hind margins to the segments; hind coxæ, tips of middle coxæ and tips of hind femora and tibiæ more blackened than in male.

Type: Male, No. 2512, and *allotype*, female, No. 2513, Mus. Calif. Acad. Sci., taken by the author, March 13, 1926, at **Mill Valley, Marin Co., California**. Three *paratypes*, females, were taken at same time and place as type, and one pair was taken at same place on February 20, 1926.

32. *Phronia flabellata* Van Duzee, new species

Male: Length 3 mm. Head and antennæ brown; scape of antennæ, face and palpi yellow; third joint of antennæ twice as long as wide (measured over the dense hairs). Thorax dark brown, humeri yellow. Abdomen wholly black, somewhat shining; all hairs and bristles of thorax, abdomen and fore coxæ yellow. Hypopygium (fig. 19) black, somewhat globular, its claspers large, black, curved, with long black hair, which gives them a fan-like appearance, and a small protuberance on inner edge. Coxæ, femora and tibiæ yellow; hind coxæ without a basal seta; bristles of hind tibiæ very small; fore tibiæ as 49; joints of fore tarsi as 52-29-21-15-10; those of middle ones as 57-26-18-13-10; joints of posterior pair as 65-22-15-12-9. Halteres pale yellow. Wings grayish; costa scarcely produced beyond tip of radial sector; R-M crossvein placed at an angle with radial sector; hairs on radius and radial

sector very small; cubitus forking distinctly less than length of its posterior branch beyond fork of media; petiole of cubitus as 88, its anterior branch as 55 and its posterior branch as 37; petiole of media as 12, crossvein as 9.

Female colored as in the male, except that the extreme tips of posterior femora and tibiae are brownish; abdomen black with extreme tip yellow; venation about as in the male.

Type: Male, No. 2514, and *allotype*, female, No. 2515, Mus. Calif. Acad. Sci., taken by the author, March 13, 1926, at **Mill Valley, Marin Co., California**. Two *paratypes*, males, were taken at same time and place.

This is very much like the western species described by Dr. Johannsen as *venusta*, but it differs from his figure in having the hair on the claspers much longer, nor does his figure show the projection on the side that is found in this form; the fore basitarsus in that species is also shorter than its tibia, while in this species it is longer than the tibia. *P. fusciventris* n. sp., described here, is also very much like these in color, having the abdomen wholly black, but that species differs very much in the form of the claspers, and has the tips of both hind femora and tibiae conspicuously black and hind coxae partly black.

33. *Phronia fusciventris* Van Duzee, new species

Male: Length 3 mm. Head, thorax and abdomen black or blackish; antennae brown, antennal scape, face and palpi yellowish brown; all hairs on thorax, abdomen and fore coxae yellow, humeri yellow. Hypopygium (fig. 20) black, its appendages yellowish brown, upper pair long, curved, and fringed on outer surface with long curved hairs. Coxae yellow; hind pair infuscated on the posterior disc, middle ones slightly infuscated at tip; femora and tibiae yellow; posterior femora and tibiae considerably blackened; hind coxae without a basal seta; bristles of posterior tibiae not as long as diameter of tibia; fore tibiae as 49; joints of fore tarsi as 42-22-16-10-11; those of middle ones as 43-19-15-11-8; joints of posterior pair as 56-17-13-9-9. Halteres pale yellow. Wings dark grayish; R-M crossvein placed at a small angle with the radial sector, not in the same line; radius and radial sector long, haired nearly to their tips; cubitus forking a little more than length of its posterior branch beyond fork of media; petiole of cubitus as 80, its anterior branch as 43, and its posterior branch as 28; R-M crossvein as 10, petiole of media the same; costa projecting only a little beyond tip of radial sector.

Female like the male except that the petiole of the cubitus seems shorter. Abdomen wholly black, even its tip being black; middle and

hind coxæ largely black and bristles on the scutellum black. Described from a single pair.

Type: Male, and *allotype*, female, taken by the author, March 13, 1926, at Mill Valley, Marin Co., California, in author's collection.

This form will be readily recognized by its wholly black, somewhat shining, abdomen and the long slender curved claspers.

34. *Exechia unicolor* Van Duzee, new species

Male: Length 3.7 mm. Black with yellowish brown legs, brown tarsi and yellow halteres. Hairs on the head, eyes and thorax black, those on abdomen long and yellow. Claspers yellow, longer than hypopygial segment, with a rather long thumb-like fork near base; their hairs mostly black, but those at tip yellow; head, thorax, and scutellum with brown pollen; fore coxæ with long black hairs on outer surface; setæ of posterior tibiæ short, hair-like; fore tibiæ as 47, tarsal joints as 45-27-26-15-13. Wings very slightly tinged with brown, veins dark brown; basal section of the radial sector very short, not much longer than broad; media forking near the middle of the R-M crossvein; petiole of cubitus about twice as long as its anterior branch.

Type: Male, No. 2516, Mus. Calif. Acad. Sci., collected by Mr. A. Christoferson in July, 1923, on St. Paul Island, Alaska. *Paratype*, one male, same data.

35. *Exechia borealis* Van Duzee, new species

Male: Length 3 mm.; of wing 2.3 mm. Head, face, scutellum, black; mesonotum and pleuræ largely black; humeri, lateral edges of mesonotum, venter of first four abdominal segments, a triangular spot on sides of second to fourth segments at posterior margin, hypopygium, halteres, first three antennal joints, palpi, coxæ, femora and tibiæ, yellow; tarsi yellowish brown; antennæ, except three basal joints, brown, their intermediate joints one-third longer than wide; fore basitarsi to tibiæ as 26 to 31. Wings grayish; Media forking opposite distal third of R-M crossvein; cubitus forking proximad of basal end of R-M crossvein; hairs of thorax, abdomen and fore coxæ white or pale yellow, those of legs black. Described from two males.

Type: Male, No. 2517, Mus. Calif. Acad. Sci., taken by J. A. Kusche, May 15, 1923, at Skagway, Alaska. One *paratype* taken at the same place and time.

36. *Exechia æqualis* Van Duzee, new species

Male: Length 3 mm. Head, face and antennæ brown, scape of antennæ yellow; palpi yellowish brown. Thorax, pleuræ and abdomen brown, a small spot at the humeri yellow; minute hairs on thorax and abdomen yellow. Hypopygium (fig. 21) brown, appendages mostly yellow, armed with a pair of long hairy appendages which have a smooth blunt tip, and with one or two pairs of smooth, short, curved inner appendages. Halteres, coxæ and femora yellow. Tibiæ more or less brown, lower surface of fore and hind pairs yellow; tarsi brown; fore coxæ with very minute yellow hairs on anterior surface and black hairs on outer edge; bristles on posterior tibiæ scarcely as long as diameter of tibia; fore tibia as 49; joints of fore tarsi as 50-34-24-16-10; of middle ones as 55-31-22-16-12; joints of posterior pair as 58-27-19-13-10. Wings grayish; sections of radius as 49 to 73; radial sector only a little bent back at tip; petiole of media 8, R-M crossvein 17; petiole of cubitus 75, anterior branch of cubitus 56 and posterior branch 40 fiftieths of a millimeter long; cubitus forking far beyond base of R-M crossvein.

A female that seems to belong here has the palpi yellow and the petiole of the media and R-M crossvein nearly equal in length, otherwise it is about as in the male.

Type: Male, and *allotype*, female, in the author's collection, taken by him at **Mill Valley, Marin Co., California**; the type February 21, the allotype March 20, 1926.

This is a small brown species with very long claspers, the fore tibia and basitarsus of nearly equal length, and the cubitus forking considerably beyond the distal end of R-M crossvein.

37. *Exechia noctivagus* Van Duzee, new species

Male: Length 4 mm. Head, face and antennæ brown, scape of antennæ, and palpi yellow. Thorax, including most of pleuræ, brown; humeri yellow; small hairs of thorax and abdomen yellow. Abdomen black with yellow triangles on sides of segments at posterior margin; those on second and third segments largest; those on apical segments reduced to narrow line. Hypopygium (fig. 22) brownish, with two pairs of long, blunt appendages, of nearly equal size. Halteres, coxæ and femora yellow, tips of middle and hind femora brownish; tibiæ and tarsi brown; bristles of posterior tibiæ scarcely as long as their diameter; fore tibia as 55; joints of fore tarsi as 75-43-31-22-16, of middle ones as 72-41-31-21-12, those of posterior pair as 79-34-22-16-11. Wings grayish, costal cell tinged with brown; sections of radius as 50 to 75; petiole of media 7, R-M crossvein 13, petiole of cubitus 65, anterior branch of cubitus 65 and posterior branch 45, fiftieths of a millimeter long; cubitus forking a little beyond distal end of R-M crossvein.

Type: Male, No. 2518, Mus. Calif. Acad. Sci., taken by the author, February 13, 1926, at Mill Valley, Marin Co., California. Two male *paratypes* also were taken at same place on April 3 and 8, 1926.

38. *Exechia brevipetiolata* Van Duzee, new species

Male: Length 3.2 mm. Head brown, face yellowish brown; scape of antennæ and palpi yellow. Thorax brown, humeri yellow, pleuræ mostly yellowish; outer corners of scutellum a little yellowish. Abdomen black, base of first five segments yellow; small hairs on abdomen pale. Hypopygium (fig. 23) yellow, its forked appendages blackish. Halteres, coxæ and femora yellow, extreme tips of coxæ and femora brownish; tibiæ and tarsi brown; bristles of posterior tibiæ not as long as diameter of tibia; hairs and bristles of fore coxæ black; fore tibiæ as 62; joints of fore tarsi as 63-45-37-27-18; of middle ones as 76-42-30-21-16; those of posterior pair as 83-32-21-15-11. Wings grayish; sections of radius as 69 to 78; radial sector considerably bent back at tip; petiole of media 8, R-M crossvein 20, petiole of cubitus 39, anterior branch of cubitus 100, and posterior branch 78, fiftieths of a millimeter long; fork of the cubitus opposite the proximal end of R-M crossvein.

Type: A unique male, in the author's collection, taken by him February 20, 1926, at Mill Valley, Marin Co., California.

The pair of forked hypopygial appendages, nearly equal fore tibia and basitarsus, and the cubitus forking nearly opposite the R-M crossvein, distinguish this species from those related to it.

39. *Exechia cincinnata* Johannsen

I found this species abundant at Mill Valley, Marin Co., California, from February to May, 1926. The specimens were more distinctly black and yellow than those I had taken in the east and the measurements of the tarsal joints are perhaps slightly different; still I feel no doubt of the determination. The hypopygium (fig. 24) and its appendages is the same as in eastern specimens; the fore tibia of the California specimens are as 55, joints of their tarsi as 54-38-33-24-14; those of middle ones as 60-36-30-21-13, and of posterior pair as 68-29-23-16-10; petiole of cubitus as 74, its anterior branch as 67, posterior branch as 38; petiole of media as 7, R-M crossvein as 15.

40. *Exechia angustata* Van Duzee, new species

Male: Length 5 mm. Head and face brown; palpi and first three antennal joints yellow, remaining joints of antennæ brown or brownish yellow. Thorax brown or yellowish brown, pleuræ more yellow; small hairs on thorax and abdomen yellow, bristles black. Abdomen black or brown, posterior margin of first five segments yellow, the yellow widest on fourth segment. Hypopygium (fig. 25) large, yellow, its appendages mostly blackish; lower appendages slender, the tip, which is a little enlarged, with small bristles or spines on inner surface, and long hairs nearly to their tips; knobs of halteres a little brownish. Coxæ, femora and tibiæ yellow, posterior tibiæ more brownish towards their tips, their setæ not as long as the diameter of tibia; basal seta of hind coxæ black; fore coxæ with pale hair, the long bristly hairs on outer edge of apical half appear black in certain lights, but yellow when seen against a dark background; tarsi brown, slender; fore tibia as 64; joints of fore tarsi as 87-66-38-25-15; those of middle ones as 85-48-32-22-15; joints of posterior pair as 78-36-22-14-9; fore basitarsus nearly $1\frac{1}{4}$ times as long as its tibia. Wings slightly grayish, veins yellowish brown; costal cell slightly tinged with brown; sections of radius as 61 to 86; R-M crossvein 15, petiole of media 9, petiole of cubitus 73, posterior branch of cubitus 55, fiftieths of a millimeter long; fork of the cubitus a little beyond the proximal end of the R-M crossvein; radial sector considerably bent so as to approach the anterior branch of the media at tip, being most widely separated from media at tip of the radius.

Female like the male in color and wing characters; last abdominal segment yellow, the minute lamellæ at tip brown with long black hair; all segments of abdomen with yellow hind margins.

Type: Male, No. 2519, Mus. Calif. Acad. Sci., taken by the author February 20, 1926, at Mill Valley, Marin Co., California; *allotype*, female, No. 2520, Mus. Calif. Acad. Sci., taken March 13, 1926, at same place. Three male *paratypes* also were taken by the author at the same place, February 20 and 25, and March 1, 1926.

This is something like *nugar* Johannsen, but differs in having the lower appendages of the hypopygium hairy and the inner appendages very much shorter; the fore basitarsi are also longer in proportion to their tibiæ.

41. *Exechia umbrosa* Van Duzee, new species

Male: Length 4 mm. Head and face brown; palpi more yellow; antennæ brown with the scape yellow. Thorax brown, humeri yellow; pleuræ more yellowish brown. Abdomen dark brown, its hairs pale; posterior margin of some or all of the segments yellow on the sides, in

the type the abdomen is almost wholly brown; hypopygium (fig. 26) brown. Halteres and coxæ yellow, the latter with extreme tip brown; anterior coxæ with black hair; posterior pair with a black basal seta; femora yellowish, more or less brown at base and tip; posterior tibiæ yellowish, their bristles about half as long as diameter of tibia; fore and middle tibiæ brown; fore basitarsus 1.34 times as long as its tibia, the fore tibiæ being as 65; joints of fore tarsi as 86-53-38-25-11; joints of middle ones as 86-48-30-20-14; and of posterior ones as 99-35-23-15-11. Wings gray, costal cell tinged with brown; apical two-thirds of wing dark gray, their color beginning at fork of media and cubitus, and including a paler spot in front of basal portion of media; sections of radius as 60 to 100; petiole of media 9, R-M crossvein 15, petiole of cubitus 75, anterior branch of cubitus 77, and posterior branch 55, fiftieths of a millimeter long; cubitus forking a little beyond distal end of the R-M crossvein; the radial sector considerably bent backward at tip.

Type: Male, No. 2521, Mus. Calif. Acad. Sci., taken by the author, February 7, 1926, at Mill Valley, Marin Co., California. One male *paratype* also was taken at same place, March 13, 1926.

42. *Exechia uncinata* Van Duzee, new species

Male: Length 3.4 mm. Head, face and antennæ brown, first three antennal joints and palpi yellow. Thorax brown; pleuræ mostly brown; humeri yellow. Abdomen black; a small spot in lower edge of first segment, and second segment, except the hind margin and a narrow line on middle of dorsum, yellow; small hairs on thorax and abdomen pale. Hypopygium (fig. 27) and its long rounded appendages yellow; venter of first two segments yellow. Halteres, coxæ and femora pale yellow; tibiæ brownish; tarsi brown; hairs on fore coxæ small, yellow, a few on outer edge of apical half black; fore tibia as 61; joints of fore tarsi as 74-44-34-25-14; of middle ones as 76-44-27-21-15; those of posterior pair as 76-30-26-16-10; seta on hind tibiæ fully as long as diameter of tibia. Wings grayish; sections of radius of equal length (72 to 72); petiole of media 10, R-M crossvein 18, petiole of cubitus 85, anterior branch of cubitus 50, and posterior branch 35, fiftieths of a millimeter long; fork of cubitus more than half length of its posterior branch beyond distal end of R-M crossvein; radial sector nearly straight.

Type: Male, in the author's collection, taken by him, February 20, 1926, at Mill Valley, Marin Co., California.

This species will be readily recognized by the narrowly broken, yellow band on second abdominal segment, the large, rounded lobes at tip of hypopygium, the equal sections of the

radius, and the cubitus forking far beyond the distal end of the R-M crossvein.

43. *Mycetophila bispina* Van Duzee, new species

Male: Length 3-3.5 mm. Head brown; face, palpi and first three joints of antennæ yellow. Thorax brown; large spots on the humeri, a minute one before the scutellum, median stripe and posterior edge of scutellum, yellow; abdomen blackish brown, somewhat shining, narrow hind margin of segments and a median line on first yellow; hairs of thorax and abdomen yellow. Hypopygium (fig. 28) yellow; claspers each with a long and a short bent bristle on inner surface. Coxæ, femora and tibiæ yellow; tips of posterior femora black, sometimes those of middle ones narrowly so; tarsi brown; fore coxæ with pale hair on anterior surface and black hair on outer side; hind femora with long hairs on lower anterior edge, some of which are black; middle tibiæ with two long bristles below; posterior tibiæ with two ranges of large bristles above; joints of fore tarsi as 40-22-18-11-11; those of posterior pair as 62-24-19-12-11. Wings grayish, more yellowish in front; central spot large, dark brown, ending in front at radius; preapical fascia beginning on costa a little beyond tip of R_1 and extending to tip of radial sector, somewhat crescent-shaped, reaching beyond posterior branch of media, but faint and often broken in cell M_1 ; subcostal vein ending free at one-third length of basal cell; cubitus forking opposite fork of media.

Female like the male, in color and wing characters, with two long bristles on lower surface of middle tibiæ. Described from twelve males and eight females.

Type: Male, No. 2522, Mus. Calif. Acad. Sci., taken February 25, 1926, at Mill Valley, Marin Co., California; *allotype*, No. 2523, Mus. Calif. Acad. Sci., taken May 5, 1926, at same place, as were the *paratypes*; all were taken by the author, the paratypes between March 4 and May 8, 1926.

44. *Mycetophila clavata* Van Duzee, new species

Length 3.5 mm. Head, thorax and abdomen brown, the latter dark and subshining, with hind margin of segments narrowly and obscurely yellow; humeri and a narrow median line on scutellum yellow; palpi yellowish brown; antennæ wholly brown; hairs on thorax and abdomen pale. Hypopygium (fig. 29) yellow, upper claspers tipped with a black spine, lower claspers clavate at tip. Coxæ, femora and tibiæ yellow, the latter a little darker in color; tarsi brown; fore coxæ with black hair and bristles; middle and hind femora a little blackened at tip; middle tibiæ with two large bristles below and a very small one nearer base; posterior tibiæ with two ranges of large bristles above; joints of fore

tarsi as 50-27-17-13-11, those of middle ones as 51-31-24-15-9, of posterior pair as 70-25-19-14-10. Wings dark grayish, the central spot large, dark brown, ending in front at the radius, but the whole costal cell tinged a little with brown; the preapical fascia beginning at the costa just beyond the tip of R_1 , extending to tip of radial sector and obliquely back to middle of cell R_s , where it turns again towards apex of wing back to M_1 , back of this it is very narrow and faint to M_2 ; subcostal vein ending free about one-third length of basal cell; cubitus forking about opposite fork of media.

Female like the male in color and wing characters, and in having two large and a small bristle below on middle tibiæ.

Type: Male, No. 2524, Mus. Calif. Acad. Sci., taken by the author, March 5, 1926, at Mill Valley, Marin Co., California; *allotype*, female, in the author's collection, taken by him February 7, at same place.

45. *Mycetophila parvimaculata* Van Duzee, new species

Male: Length 3 mm. Head brown, face more yellowish brown; scape of antennæ and palpi yellow. Thorax, including the pleuræ, brown; prothorax, extreme edges of mesonotum, a median stripe extending from front of thorax to tip of scutellum and extreme lateral angles of scutellum yellow; hairs on thorax pale with many stiffer black ones among them; scutellum with two pairs of large marginal bristles. Abdomen subshining, black with yellow hind margins to the segments and with pale hairs. Hypopygium as in figure 30; claspers elongate. Coxæ, femora and tibiæ yellow, tips of middle and hind femora and tibiæ blackish, tarsi brown; middle tibiæ without bristles below; hind tibiæ with two ranges of long bristles above and a row of stout hairs on apical third of lower inner edge, which are longest near the tip; joints of fore tarsi as 44-22-16-12-12; of middle ones as 53-30-22-15-12; those of posterior pair as 50-28-20-15-15. Wings grayish, tinged with brown in front of radial sector; central spot large, dark brown, not extending in front of vein R_1 ; preapical fascia paler brown, extending backward from R_1 but not reaching M_1 ; it is wholly proximad of tip of R_1 ; there is also a faint cloud at tip of anterior branch of media; subcostal vein ending free and a little more than one-third as long as basal cell; cubitus forking slightly proximad of the basal end of the R-M crossvein.

Type: Male, in author's collection, taken by him, March 13, 1926, at Mill Valley, Marin Co., California.

46. *Mycetophila ovata* Van Duzee, new species

Male: Length 3 mm. Head brown; face, palpi and first four joints of antennæ pale yellow. Thorax brown with the humeri broadly yellow,

scutellum with a median yellow stripe and with a yellow spot above it on posterior slope of thorax; sometimes the brown of the thorax is more in the form of three subconfluent stripes, covering most of upper surface. Abdomen dark brown, somewhat shining; hind margins of segments scarcely, if at all, bordered with yellow. Hypopygium (fig. 31) small with small somewhat oval claspers, which have only a few hairs and no spines; hairs on thorax pale, but a few on its fore part black. Coxæ, femora and tibiæ yellow, tarsi brown, tips of middle and hind femora narrowly black; middle tibiæ with three long, nearly equal bristles below; posterior tibiæ with two ranges of long bristles above; joints of fore tarsi as 23-19-16-10-9; of posterior ones as 59-23-17-12-10. Wings tinged with yellowish gray; central spot large and dark brown, but not reaching forward to R_1 ; preapical fascia beginning on costa at one-third the distance from the tip of R_1 to tip of the radial sector, extending to the tip of radial sector and backward beyond posterior branch of media, but it is much fainter beyond middle of cell R_s ; subcostal vein ending free about one-third distance to base of radial sector; cubitus forking opposite fork of media.

The female is about like the male in color and wing characters; the middle tibiæ also have the three large bristles below. Described from four males and seventeen females.

Type: Male, No. 2525, and *allotype*, female, No. 2526, Mus. Calif. Acad. Sci., taken by the author, April 1 and February 25, 1926, respectively, at Mill Valley, Marin Co., California; *paratypes* were taken by the author at the same place from February 13 to May 4, 1926.

47. *Mycetophila fusca* Van Duzee, new species

Male: Length 3 mm. Head, including mouth parts, brown; thorax and abdomen blackish brown, subshining, with pale hairs; scutellum lighter brown; humeri yellow. Hypopygium as in figure 32; halteres, coxæ, femora and tibiæ yellow; fore coxæ with pale hairs on anterior surface and longer black hair on outer side; tips of middle and hind tibiæ dark brown; posterior femora with a few long hairs below near the tip, their tibiæ with two ranges of large bristles on upper surface; middle tibiæ without a large bristle below, but sometimes with two small bristles or stiff hairs there; tarsi brownish; joints of fore tarsi as 34-20-14-10-8; middle tibia as 56, joints of middle tarsi as 40-22-17-13-10; hind tibiæ as 73, joints of their tarsi as 56-18-14-12-9. Wings grayish with two brown spots and two spots which are more hyaline, one of these between the brown spots, the other beyond preapical spot; central brown spot small, not extending forward beyond R_1 ; preapical spot, or fascia, extending along costa from tip of R_1 towards base of wing, not reaching media, forming a rounded spot, which is about as long as wide and is rather faint; subcostal vein ending free, reaching more than one-

third length of basal cell; R-M crossvein and petiole of media of equal length; cubitus forking just beyond fork of media.

Female like the male in color and wing characters and in having no bristles on lower surfaces of middle tibiæ, or with the two small ones.

Type: Male, No. 2527, and *allotype*, female, No. 2528, Mus. Calif. Acad. Sci., taken by the author, March 20, 1926, at Mill Valley, Marin Co., California; one male and seven female *paratypes* were taken by the author at same place, between February 28 and April 8, 1926.

In the type the basal half of both branches of the media are wanting in the right wing, but the other wing is normal.

48. *Mycetophila spiniger* Van Duzee, new species

Male: Length 3.2-3.7 mm. Head brown; face and palpi yellow; scape of antennæ more yellowish brown. Thorax dusky yellow with three brown vittæ which are more or less confluent; scutellum with a median yellow stripe which extends onto posterior part of thorax; pleuræ mostly black. Abdomen shining blackish brown, posterior margin of segments yellow. Hypopygium as in figures 33 & 34. Halteres, coxæ, femora and tibiæ yellow; tips of posterior femora and tibiæ, the tibial spurs and all tarsi brown; middle tibiæ with two bristles below; posterior with two ranges of long bristles above; fore tibiæ as 52; joints of fore tarsi as 50-28-22-14-12; joints of posterior pair as 69-27-21-15-11. Hairs of fore coxæ black, those of thorax and abdomen pale. Wings grayish, costal cell tinged with yellow; a brown spot covering the crossveins; preapical fascia reaching from costa to hind margin of wing at tip of C_2 , on costa beginning just beyond the tip of R₁, extending to tip of radial sector, and becoming wider and fainter beyond second branch of media; cubitus forking a little beyond fork of media; subcostal vein nearly a third as long as basal cell.

Female colored as in male and wings about same as described above; fore tibiæ and basitarsus of about same proportion as in male; middle tibiæ with two large bristles below.

Type: Male, No. 2529, and *allotype*, female, No. 2530, Mus. Calif. Acad. Sci., taken by the author May 16, 1926, at Mill Valley, Marin Co., California; 34 *paratypes* taken at same place in March, April and May.

This is much like *extenta* Johannsen, which also has a spine at tip of claspers, but in that species the claspers are longer and more slender, the bristle at tip longer and the preapical fascia reaching only a little beyond M_2 . In this species there is sometimes a faint cloud at apex of wing.

49. *Mycetophila pectoralis* Van Duzee, new species

Male and female: Length 4.2 mm.; of wing the same. Head brown; face black; palpi and antennal scape yellow, flagellum brown, its intermediate joints twice as long as wide; mesonotum dull brown, its sides broadly yellow; middle third of scutellum and halteres yellow; propleuræ yellow with black setæ; mesopleuræ black, subshining, sternopleuræ more brown; abdomen shining black with very narrow hind margin of segments yellow; small hairs on head, thorax and abdomen yellow, their setæ black; head with a row of black setæ just above the antennæ and along the orbits. Hypopygium and claspers yellow; claspers short, rounded posteriorly with a black, spine-like appendage on inner side; which is straight to near its end where it is abruptly bent.

Coxæ wholly, femora, tibiæ and base of tarsi yellow, tarsi brown at tip; fore coxæ with minute yellow hairs on anterior surface and a row of black setæ at tip; hind femora narrowly black at apex, with four long black subapical hairs; hind tibiæ with two rows of strong bristles; middle tibiæ with three strong bristles on lower surface; tibial spurs yellowish brown.

Wings slightly tinged with yellow; a dark brown spot on the crossveins reaching R_1 ; an indistinct shade opposite this back of the cubitus; cubitus forking just beyond fork of media, its petiole about as long as its anterior branch; petiole of media very short, half as long as basal section of radial sector; a preapical fascia extending from tip of R_1 along costa to tip of R_s and back to Cu_2 becoming faint beyond M_1 .

Fore basitarsus almost as long as its tibia; posterior basitarsus just equal to the remaining four joints taken together.

Type: Male, No. 2531, Mus. Calif. Acad. Sci., collected by E. P. Van Duzee, June 1, 1919, at **Santa Cruz, California**. *Paratype*, one male, same data.

50. *Mycetophila singularis* Van Duzee, new species

Male: Length 3.5 mm.; of wing 4.2 mm. Head reddish brown, face dark yellow; palpi yellow; antennae brown, scape yellow; first joint of flagellum very narrow at base, normal size at tip; joints 3-6 apparently have their ends enlarged, when viewed from above, from the side they are of equal width, the antenna being flattened, the intermediate joints longer than wide. Thorax reddish yellow with faint brownish stripes, its hairs yellow, bristles black; pleuræ more brownish; scutellum yellowish. Abdomen subshining black, posterior margins of segments narrowly, and the venter, yellowish, its hairs short, yellow; hypopygium yellow, claspers oval with a curved black spine on inner side which nearly reaches their tips. Coxæ, femora, and posterior tibiæ yellow; fore and middle tibiæ and all tarsi brownish; tibial spurs dark brown; tips of posterior femora black; fore tarsi slender, each joint a little nar-

rowed at base, second joint widest; fore tibia as 40, their tarsal joints as 30-13-12-10-8; hind femora with two or three long hairs near lower edge of apical third on anterior surface; fore coxæ with pale hairs and several black setæ on outer edge; posterior tibiæ with two ranges of bristles. Wings slightly tinged with yellow; a large brown spot over the crossveins, sometimes reaching the costa; a preapical fascia reaching from the costa to posterior margin of wing at tip of Cu, and along costa to tip of R₄₊₅, the cubitus forking distinctly beyond the fork of the media, its petiole being longer than its anterior branch; subcostal vein ending free, about one-third as long as first basal cell.

Type: Male, No. 2532, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, June 1, 1919, at **Santa Cruz, California.**